

I. Listing of the Claims

1. (Currently Amended): A header for a heat exchanger, comprising:

a substantially planar base portion extending laterally defining a width and longitudinally defining a length; and

a pair of step portions, each step portion extending longitudinally along a respective side of the base portion and extending laterally at an angle between about 15 and 75 degrees as a straight segment from the plane of the base portion; wherein, the base portion forms at least part of an outer wall surrounding an interior volume in fluid communication with a plurality of tube ends, the header being provided with a plurality of substantially parallel slots spaced apart along the length of the header, each slot having an elongate section extending across the width of the base portion and end sections extending from the elongate section into the step portions of the header, each elongate section and each end section of each slot being engaged with a single tube such that the tube extends through the slot and the header structurally supports the respective tube in the heat exchanger.

2. (Original): The header of claim 1, wherein the end sections each have a terminal end spaced apart from the plane of the base portion, thereby defining a separation distance.

3. (Original): The header of claim 2, wherein the separation distance is from about 2 mm to about 20 mm.

4. (Original): The header of claim 1, wherein the spacing between adjacent slots is between about 4 mm to 15 mm.

5. (Original): The header of claim 1, wherein the elongate section of the slots each have a length of about 3 mm to 85 mm.

6. (Original): The header of claim 1, wherein the end sections each have a length of about 2.5 mm to 28 mm.

7. (Original): The header of claim 1, further comprising an equal plurality of substantially flat tubes, each tube being inserted into a respective slot.

8. (Original): The header of claim 7, wherein each tube is brazed, soldered, or mechanically assembled to the respective slot.

9. (Original): The header of claim 8, wherein the juncture between each tube and the elongate section of a respective slot defines a transition line of deformation.

10. (Original): The header of claim 9, wherein the transition line of deformation is spaced apart from the highest stress concentrations.

11. (Original): The header of claim 10, wherein the highest stress concentrations occur on the tube at or near the location of the juncture between the terminal ends of the end sections and the tube.

12. (New): The header of claim 1 wherein the header is formed of a plate having a substantially constant thickness.

13. (New): The header of claim 1 wherein the thickness of the base portion is equal to the thickness of the step portions.

14. (New): The header of claim 1 wherein the base portion is of constant thickness and the step portions are of constant thickness, other than portions defining the slots.